SUBSTITUTED 1,4-DIAZEPINES AND USES THEREOF

ABSTRACT

The present invention is directed to novel 1,4-diazepines, pharmaceutical compositions thereof, and the use thereof as inhibitors of HDM2-p53 interactions. Compounds have Formula *I*:

$$R^{1}$$
 R^{2}
 R^{3}
 R^{8}
 R^{7}
 R^{6}
 R^{5}
 R^{4}

or a solvate, hydrate or pharmaceutically acceptable salt thereof; wherein:

R¹, R², R⁹, R¹⁰, R^a, R^d and M are defined herein;

X is a bivalent radical of: an alkane, a cycloalkane, an optionally-substituted arene, an optionally-substituted heteroarene, an optionally-substituted arylalkane or an optionally-substituted heteroarylalkane; and

R³ is -CO₂R^d, -CO₂M, -OH, -NHR^d, -SO₂R^d, -NHCONHR^d, optionally-substituted amidino or optionally-substituted guanidino;

or R³-X- is hydrogen or an electron pair;

R⁴ is oxygen or -NR⁹R¹⁰;

R⁵ is cycloalkyl, aryl, heteroaryl, cycloalkylalkyl, aralkyl, heteroarylalkyl, or a saturated or partially unsaturated heterocycle, each of which is optionally substituted; and

R⁶, R⁷ and R⁸ are independently hydrogen, alkyl, cycloalkyl, aryl, heteroaryl, a saturated or partially unsaturated heterocycle, cycloalkylalkyl, aralkyl or heteroarylalkyl, each of which is optionally substituted; or R⁶ and

R⁷, together with the carbon atom to which they are attached form a 3- to 7-membered carbocyclic ring optionally substituted 1 to 3 times with R^a.